CLAIMS:

1. (Previously presented) An apparatus for driving a liquid crystal display, including a plurality of pixels arranged in a matrix, the apparatus comprising:

a signal controller supplying image data to a data driver and generating digital gray data based on a distribution of grays of the image data for one frame; and,

a digital/analog converter converting the digital gray data from the signal controller into analog voltages and supplying the analog voltages to the data driver as the gray voltages,

the data driver selecting data voltages corresponding to the image data representing at least one gray from the gray voltages and applying the data voltages to the pixels,

wherein the signal controller comprises a gray voltage generator reading out the image data for one frame, calculating the gray distribution of the image data and modifying a standard gray voltage curve to obtain the digital gray data, and

wherein the gray voltage generator calculates a target gray voltage (VGX') of each value section corresponding to the digital data voltage based on relations given by:

$\Delta VX' = \Delta VX \cdot (1+KX \cdot \Delta PX)$ and,

$VGX' = \Delta VX' \cdot (\Sigma\Delta V/\Sigma\Delta V') + VGX-1$,

where ΔVX is a difference between a maximum gray voltage and a minimum gray voltage for the value section on the standard gray voltage curve, KX is a weight value assigned to the section, ΔPX is defined as PX- (AP)X, where PX is a distribution probability for the value section and (AP)X is a distribution probability for maintaining the standard gray voltage curve, $\Sigma\Delta V$ is a sum of the differences (ΔVX) between maximum gray voltages

and minimum gray voltages for the respective value sections on the standard gray voltage curve, $\Sigma\Delta V'$ is a sum of $\Delta VX'$, and VGX-1 is a maximum gray voltage of a previous value section in the standard gray voltage curve.

2. (Cancelled)

3. (Previously presented) The apparatus of claim 1, wherein each image data has a luminance data having a value, which is determined by the at least a gray represented by the image data and be-longing to one of a plurality of value sections, and the gray distribution is associated with the number of the image data belong to respective value sections.

4. (Original) The apparatus of claim 3, wherein each image data includes a set of image data portions for a predetermined number of respective colors, and the luminance data of the im-age data is defined as an average of the grays represented by the set of the image data portions forming the image data.

5. (Canceled)

6. (Currently amended) The apparatus of claim 1[[5]], wherein the gray voltage generator calculates the luminance data of the image data for one frame, calculates the number of the image data included in the value sections to obtain the gray distribution of the image data.

7. (Canceled)

8. (Currently amended) The apparatus of claim 1[[7]], wherein the weight value (KX) for each section is determined as the value exhibiting the best visibility for the value section.

9. (Currently amended) A method for driving a liquid crystal display, the method comprising:

reading out image data representing at least a gray for one frame;

calculating gray distribution of the read image data;

modifying a standard gray voltage curve based on the calculated gray distribution to generate digital gray data;

converting the digital gray data into analog voltages; and

supplying the analog voltages to a data driver as gray voltages,

wherein the digital data voltage (VGX') is calculated based on relations given by:

$\Delta VX' = \Delta VX \cdot (1 + KX \cdot \Delta PX)$ and,

$VGX' = \Delta VX' \cdot (\Sigma\Delta V / \Sigma\Delta V') + VGX-1$,

where ΔVX is a difference between a maximum gray voltage and a minimum gray voltage for the value section on the standard gray voltage curve, KX is a weight value assigned to the section, ΔPX is defined as PX- (AP)X, where PX is a distribution probability for the value section and (AP)X is a distribution probability for maintaining the standard gray voltage curve, $\Sigma\Delta V$ is a sum of the differences (ΔVX) between maximum gray voltages and minimum gray voltages for the respective value sections on the standard gray voltage curve, $\Sigma\Delta V'$ is a sum of $\Delta VX'$, and VGX-1 is a maximum gray voltage of a previous value section in the standard gray voltage curve.

10. (Original) The method of claim 9, wherein the gray distribution calculation comprises:

calculating luminance data of the image data based on the at least a gray represented by the image data; and,

counting the number of the image data included in a plurality of sections of the luminance data.

11. (Canceled)

12. (Currently amended) The method of claim 9[[11]], wherein the weight value (KX) for each section is determined as the value exhibiting the best visibility for the value section.

13. (Original) The method of claim 10, wherein each image data includes a set of image data portions for a predetermined number of respective colors, and the luminance data of the image data is defined as an average of the grays represented by the set of the image data portions forming the image data.